

REMARKS

Claims 1-3 are pending in this application.

Claims 4-23 were previously withdrawn.

Claim 1 has been rejected.

Claims 2 and 3 have been objected to.

Claim 1 has been amended as shown above.

Claims 1-23 remain pending in this application.

Reconsideration and full allowance of Claims 1-3 are respectfully requested.

I. ALLOWABLE CLAIMS

The Applicants again thank the Examiner for the indication that Claims 2 and 3 would be allowable if rewritten in independent form. Because the Applicants believe that the remaining claims in this application are still allowable, the Applicants have not rewritten Claims 2 and 3 in independent form.

II. REJECTION UNDER 35 U.S.C. § 102

The Office Action rejects Claim 1 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2003/0016762 to Martin et al. ("*Martin*"). The Applicants respectfully traverse this rejection.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as

they are in the claims. MPEP § 2131, p. 2100-76 (8th ed., rev. 4, October 2005)(citing *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990)). Anticipation is only shown where each and every limitation of the claimed invention is found in a single prior art reference. *Id.* (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987)).

Martin fails to anticipate a “variable phase-shifting circuit,” as required by amended Claim 1. For example, the Applicants direct the Examiner’s attention to Figure 1 and Figure 2 of *Martin*, and in particular to Block 108. Block 108 is a multiphase signal source used to generate a plurality of phases of a carrier signal. Within Block 108, *Martin* discloses a ring of inverters 202, which act as a ring oscillator. The inverters 202 of *Martin* represent variable propagation delay differential inverters, where a phase difference is provided across each pair of inverters. Nothing in *Martin* discloses that these differential signals actually represent an “input” to the ring oscillator. At most, this may indicate that the ring oscillator of *Martin* is formed from phase-shifting circuits. In particular, the Applicants note that *Martin* fails to disclose any external inputs to its ring oscillator. Thus, the output signal is not phase-shifted version of a control signal originating from a source external to said variable phase-shifting circuit, as required by amended Claim 1. *Martin* therefore clearly fails to anticipate a “variable phase-shifting circuit,” as required by amended Claim 1.

Second, *Martin* fails to anticipate a “synchronized oscillator” having a “synchronization input” as recited in Claim 1. The Office Action appears to rely on an input to the first inverter 202 of *Martin* as anticipating the “synchronization input” of a “synchronized oscillator” as

recited in Claim 1. (*Office Action, Page 2*). The ring of inverters 202 in *Martin* simply represents a standard ring oscillator. A standard ring oscillator is formed from a ring of inverters, where the ring of inverters has an output (or multiple outputs) and no inputs. The input to the first inverter 202 of *Martin* simply represents part of the ring. The input to the first inverter 202 of *Martin* does not represent an input to the ring oscillator. In fact, any assertion that the input to the first inverter 202 represents a “synchronization input” of an oscillator would be completely arbitrary. In terms of “input” to the ring oscillator, nothing would distinguish the input to the first inverter 202 from the input to the second inverter 202 or the input to any other inverter 202 in the ring. In other words, the Office Action would be artificially selecting one set of differential signals in the ring oscillator of *Martin* and asserting that these signals represent a “synchronization input” when nothing in *Martin* discloses that these differential signals actually represent an “input” to the ring oscillator. Moreover, the Office Action contends that the “input” and the “output” have *specified* oscillation frequencies. Yet, the Office Action goes on to contend that the synchronized oscillator has a *variable free running* oscillation frequency. Even if the previous assumptions were true, it would not be possible for the “synchronized oscillator” to have a *variable free running* oscillation frequency, while the “input” and “output” have *specified* oscillation frequencies.

Finally, the Office Action treats the signal feedback signal from the output of the ring of inverters 202 as both “having a specified oscillation frequency” as required by the claims for the input signal and “having a variable free-running oscillation frequency” as required by the claims for the output of the synchronized oscillator. As seen by from Figure 2 (reproduced below), the

SUMMARY

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@munckbutrus.com*.

The Commissioner is hereby authorized to charge any fees connected with this communication (including any extension of time fees) or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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